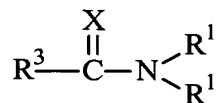


WHAT IS CLAIMED IS:

1. An aqueous polyurethane dispersion comprised of water having therein dispersed polyurethane particles and a nonvolatile non-reactive property enhancing water-soluble compound.

2. The aqueous polyurethane dispersion of Claim 1, wherein the nonvolatile non-reactive property enhancing water-soluble compound is

(a) an amido compound of the formula:



where X is NH, O or S and each R<sup>1</sup> is independently H or a 1-35 carbon containing monovalent radical that is aliphatic, aromatic or combination thereof, which may be substituted with up to five atoms selected from the group consisting of oxygen, nitrogen, sulfur, phosphorous, halogen and combinations thereof and R<sup>3</sup> is -N(R<sup>1</sup>)<sub>2</sub> or -C(R<sup>1</sup>)<sub>3</sub>;

(b) a salt of the amido compound;

(c) a sugar;

(d) melamine; or

(e) combination thereof.

3. The aqueous polyurethane dispersion of Claim 1, wherein the nonvolatile non-reactive property enhancing water-soluble compound is urea, thiourea, N,N'-dimethylurea, N,N-dimethylurea, a C<sub>6</sub> sugar, a C<sub>12</sub> sugar, guanidine, thioguanidine, or combination thereof.

4. The aqueous polyurethane dispersion of Claim 1, wherein the nonvolatile non-reactive property enhancing

water-soluble compound is urea, glucose, sucrose,  
N,N'-dimethylurea, N,N-dimethylurea or combination thereof.

5        5.    The aqueous polyurethane dispersion of Claim  
1, wherein the polyurethane particles are a nonionizable  
polyurethane.

6.    The aqueous polyurethane dispersion of Claim  
5, wherein the polyurethane particles are of an aromatic  
polyisocyanate.

10       7.    A method of forming an improved polyurethane  
dispersion comprising,

15           (a)    reacting in water an isocyanate terminated  
polyurethane prepolymer and a chain extending  
agent until substantially all of the  
isocyanate has been reacted to form a  
polyurethane dispersion and

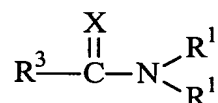
          (b)    adding to the polyurethane dispersion a  
nonvolatile, non-reactive, property enhancing,  
water soluble compound to form the improved  
polyurethane dispersion.

20       8.    The method of Claim 7 wherein the property  
enhancing, water soluble compound is added immediately after  
the dispersion has been formed causing the temperature of the  
dispersion to decrease.

25       9.    A polyurethane comprised of a polyurethane  
having therein a nonvolatile, non-reactive, property  
enhancing water-soluble compound, a decomposition product of  
the non-reactive, property enhancing water-soluble compound  
or a reaction product of the non-reactive, property enhancing  
water soluble compound with another compound other than the  
30    polyurethane or precursors that form the polyurethane.

10. The polyurethane of Claim 9, wherein nonvolatile non-reactive property enhancing water-soluble compound is

5 (a) an amido compound of the formula:



where X is NH, O or S and each R<sup>1</sup> is independently H or a 1-35 carbon containing monovalent radical that is aliphatic, aromatic or combination thereof, which may be substituted  
 10 with up to five atoms selected from the group consisting of oxygen, nitrogen, sulfur, phosphorous, halogen and combinations thereof and R<sup>3</sup> is -N(R<sup>1</sup>)<sub>2</sub> or -C(R<sup>1</sup>)<sub>3</sub>;

(b) a salt of the amido compound;

(c) a sugar;

15 (d) melamine;

(e) a decomposition of the aforementioned;

(f) a reaction product of the aforementioned; or

(g) a combination thereof.

11. The polyurethane of Claim 9, wherein the  
 20 nonvolatile non-reactive property enhancing water-soluble compound is urea, thiourea, N,N'-dimethylurea, N,N-dimethylurea, a C<sub>6</sub> sugar, a C<sub>12</sub> sugar, guanidine, thioguanidine, a decomposition product of the aforementioned, a reaction product of the aforementioned or combination  
 25 thereof.

12. The polyurethane of Claim 9, wherein the nonvolatile non-reactive property enhancing water-soluble

compound is urea, glucose, sucrose, N,N'dimethylurea, N,N-dimethylurea, a decomposition product of the aforementioned, a reaction product of the aforementioned or combination thereof.

5           13. The polyurethane of Claim 9, wherein the polyurethane has therein the nonvolatile, non-reactive, property enhancing water-soluble compound.

10           14. The polyurethane of Claim 13, wherein the nonvolatile, non-reactive, property enhancing water-soluble compound is urea, glucose, sucrose, N,N'dimethylurea, N,N-dimethylurea or combination thereof.

15           15. The polyurethane of Claim 9, wherein the polyurethane is tackier than a like polyurethane without the nonvolatile, non-reactive, property enhancing water-soluble compound.

            16. The polyurethane of Claim 13, wherein the nonvolatile, non-reactive, property enhancing water-soluble compound remains in the polyurethane after being exposed to water.

20           17. The polyurethane of Claim 9, wherein the % elongation of the polyurethane is at least about 5% greater than a like polyurethane lacking the nonvolatile, non-reactive, property enhancing water-soluble compound.

25           18. The polyurethane of Claim 9, wherein the tensile strength of the polyurethane is at least about 5% greater than the tensile strength of a like polyurethane lacking the nonvolatile, non-reactive, property enhancing water-soluble compound.

30           19. A method of forming a polyurethane object comprising:

            (a) forming an object from an aqueous polyurethane dispersion comprised of water and polyurethane

particles and having therein a nonvolatile, non-reactive property enhancing water soluble compound and

(b) heating the formed object to a temperature such that the nonvolatile, organic property enhancing compound decomposes or reacts with a component of the aqueous polyurethane dispersion other than the polyurethane particles forming a resultant nonvolatile compound in the polyurethane object.

20. The method of Claim 19, wherein the NNPEW reacts with an additive selected from the group consisting of rheological modifiers, defoamers, antioxidants, pigments, water insoluble fillers, dyes, and combinations thereof.

21. The method of Claim 19 wherein the NNPEW is urea, thiourea, N,N'-dimethylurea, N,N-dimethylurea, a C<sub>6</sub> sugar, a C<sub>12</sub> sugar, guanidine, thioguanidine, or combination thereof.